Title	Some Remarks on Ga/No Conversion and Feature Inheritance
Author(s)	越智, 正男
Citation	言語文化共同研究プロジェクト. 2017, 2016, p. 21-30
Version Type	VoR
URL	https://doi.org/10.18910/61994
rights	
Note	

Some Remarks on Ga/No Conversion and Feature Inheritance[*]

Masao Ochi

1. Introduction

Ga/No Conversion (henceforth GNC) typically occurs in adnominal clauses (see Ochi in press for a comprehensive review of the phenomenon).

(1)　　Taroo　ga/no　　　　kuru　hi
　　　　Taro　　NOM/GEN　　come　day
　　　　'the day that Taro comes'

But GNC is observed much more extensively in Hichiku Japanese (HJ), e.g., in the main clause as well as in a wide range of subordinate clauses.

(2)　　Basu　ga/no　　　　kita.
　　　　Bus　　NOM/GEN　　came
　　　　'The bus has come.'

In addition, GNC apparently occurs in temporal adjunct clauses that are not headed by a noun, for which Miyagawa (2012) postulates a special mode of licensing, Genitive of Dependent Tense (GDT).

(3)　　Taro　wa　　basu　ga/no　　　　kuru　made　mat-teita.
　　　　Taro　TOP　bus　　NOM/GEN　　come　until　was waiting

This short paper is concerned with the following two questions. First, how should we understand the alternation between -*ga* and -*no*? Second, is a unified analysis of GNC feasible? I will approach these issues by paying particular attention to Feature Inheritance of Chomsky (2008). It is an operation by which formal features on a phase head (such as C and *v*) are transferred to a head in its vicinity, enabling the latter head to act as a probe for an Agree relation, as schematically shown below.

---

(4) $[_{CP} C [_{TP} T [_{vP} .... DP ...]]]$

        |____↑|_____↑
        FT   Agree
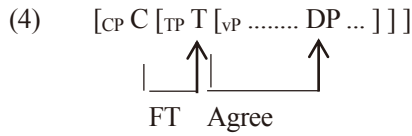
Following Miyagawa (2010, in press), I assume that feature inheritance is an option, rather than a universal requirement, made available by UG. Miyagawa argues that languages vary with respect to whether feature inheritance does or does not apply to a particular type of features. Some languages transfer phi-features from C to T while others retain them on C, for example. In what follows, I would like to entertain the idea that Japanese exercises both options (i.e., transferring or not transferring formal features) rather freely and, crucially, simultaneously within a single phase domain.

2. GNC and Feature Transfer

There are two prominent approaches to GNC. One approach, the D-licensing approach, states that D is responsible for the licensing of -*no*. The other approach, the C-licensing approach, argues that C is crucial in licensing -*no*.

(5)   a. $[_{DP} [_{NP} [_{TP} ... DP\text{-}\{ga/no\} ......] N] D]$ (Miyagawa 1993, Ochi 2001 etc.)

        b. $[_{CP} [_{TP} ... DP\text{-}\{ga/no\} ......] C_{[+nominal]}]$ (Hiraiwa 2001, 2005 etc.)

The two competing hypotheses have in common the idea that -*no* is licensed by a phase head that immediately dominates the adnominal TP, which is indicated as X in (6a) below. For ease of exposition, I assume X to be C, but it should be emphasized that the proposal to be made below can easily be reconciled with the idea that at least some instances of X are Ds. I also assume (6b).

(6)   a. $[_{XP} [_{TP} ...DP\text{-}no ....] X]$ (where X is D or C)

            ↑_____|

        b. Nominal arguments move to the domain of their Case licensors in overt syntax.

Now let us proceed by considering the following two observations from the past literature. First, as pointed out by Hiraiwa (201, 2005), the availability of the combination of the *ga*-subject and the *no*-object poses an interesting question for the D-licensing approach because the presence of the -*ga* subject should act as a (defective) intervener for the alleged dependency between D and the object.

(7) Taro   ga/no   eigo   ga/no   yoku   wakaru   koto

     Taro   NOM/GEN   English   NOM/GEN   well   understand   fact

     'the fact that Taro understands English well'

Second, there is some evidence that the *ga*-phrase and the *no*-phrase occupy distinct syntactic positions. As originally noted by Harada (1971) and later elaborated by Watanabe (1996) and others, the *-no* subject sounds best if it is adjacent to the predicate taking it as an argument. Watanabe (1996) took this observation as an indication that the *no*-subject occurs structurally lower than its *-ga* counterpart.
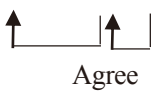
(8) a. kinoo   kodomo-tachi ga/??no   oozei kyooshitsu-de sawaida   koto
        yesterday   children   NOM/??GEN   many   classroom-at clamor   fact
        'the fact that many children clamored in the classroom yesterday'
    b. kinoo   kyooshitsu-de oozei kodomo-tachi ga/no   sawaida   koto
        yesterday   classroom-at many   children   NOM/GEN   clamor   fact

Similarly, the *no*-subject in HJ may stay in the scope of negation, an option not available for the *ga*-subject (see Ochi and Saruwatari 2014).

(9) a. Zenin ga   k-on.   ($\forall >$ neg; *neg $> \forall$)
        all   NOM   come-neg
    b. Zenin no   kon.   ($\forall >$ neg; neg $> \forall$)
        all   GEN   come-neg

In light of such observations as these, I assume that the *-ga* subject is licensed by T and hence moves to the domain of T (thus conforming to (6b)) whereas the *-no* subject remains within *v*P.[1]

Now, based on Hiraiwa's insight, I would like to entertain the hypothesis that the two Case values under discussion, i.e., *-ga* and *-no*, originate in the same head, X (=C) (see also Ochi 2009, in press). The difference between the two Case values, I propose, comes from the ways in which they are assigned. When the C head transfers its grammatical features to T, so that T probes, we get *-ga*. On the other hand, we get *-no* when C acts as a probe.

(10)   a. [$_{DP}$ [$_{TP}$ [$_{vP}$ DP ...] T] C] $\Rightarrow$ *-no*
                        Agree

          b. [$_{DP}$ [$_{TP}$ [$_{vP}$ DP ...] T] C] $\Rightarrow$ *-ga*
                        Agree   inheritance

---

[1] Kishimoto (2017) argues that the *-no* subject moves to CP. It is an interesting question how to reconcile his conclusion, which is based on the distribution of the *-no* subject containing a negative polarity item, with the behaviors of the *-no* subject that we see in examples such as (8) and (9).

Like Hiraiwa (2001), this line of analysis would explain why the *ga*-phrase and the *no*-phrase co-occur and do not interfere with each other: the two values are distinct manifestations of the same grammatical property that can be traced back to the same phase head. The hypothesis is also consistent with the idea discussed earlier that the *ga*-phrase moves out of *v*P as it is licensed by T.

Under the current proposal, the co-occurrence of -*ga* and -*no* in the same clause would arise when the C head retains and transfers its Case value at the same time, but one may wonder what that means. If the features transferred from C are literally "gone" from C, C should not be able to probe when T does. In fact, this point is critical if we accept the rationale for feature inheritance provided by Richards (2007). But once we allow feature inheritance to be optional (or parameterized as in Miyagawa (2010, in press)), that conjecture needs to be reconsidered anyway, although I have nothing new to say about why an operation like feature transfer is part of syntactic derivations. Setting this important issue aside, let us pursue a slightly different conception of feature inheritance. Based on Pesetsky and Torrego's (2001) idea that a checked/valued formal feature could stay "alive" and accessible to further operations until the completion of a phase domain in which it appears, let us say that when C transfers some features to T, they remain active "for a while" on C before being eliminated from it at the completion of the CP phase. If this line of conjecture is tenable, it would open up the possibility that both C and T probe simultaneously via the features that they share.

As for Cs that head non-adnominal clauses (e.g., Cs of the matrix clause and subordinate clauses occurring in the verbal domain etc.), I would like to suggest that the inheritance of phi-features is obligatory. If so, the distribution of the -*no* subject would be correctly confined to adnominal clauses in standard Japanese (SJ). In effect, the limited distribution of the -*no* subject in SJ is traced to the obligatory nature of feature transfer for the majority of Cs in SJ.

(11)		valuation by C ($\rightarrow$ -*no*)	inheritance to T ($\rightarrow$ -*ga*)
	C$_{[+nominal]}$	✓	✓
	All other Cs	*	✓

Now let us turn to temporal adverbial data such as those in (12) and (13), which are important for Miyagawa's (2012) genitive of dependent tense (GDT) hypothesis. Significantly, -*no* can occur on the unaccusative subject, but not on the unergative subject, in such temporal adverbial clauses.

(12) ame   ga/no   yamu   made   mati-masyoo.
      rain   NOM/GEN   stop   until   wait.let us
      'Let's wait until the rain stops.'

(13) kodomo ga/??no warau made mati-masyoo.
      child   NOM/GEN laugh until wait.let us
      'Let's wait until the child laughs.'

Following Hiraiwa (2001, 2005) and H. Takahashi (2010), I assume that GNC occurs in the absence of the nominal head in examples like (12). Let us assume that *made* 'until' is a postposition that selects among other things a clausal complement headed by the null $C_{[+temporal]}$. Now, H. Takahashi (2010) and Miyagawa (2012) suggest that *-no* that we see in examples like (12) is neither due to a D head (because there is no nominal head) nor to a C head (because only internal arguments can be *-no* marked in this type of configuration). This point led Miyagawa to pursue an analysis in which this type of *-no* is licensed by the combination of weak *v* and a particular type of T that is referred to as dependent T. It is worth pointing out that of the two heads involved in GDT, it is weak *v* and not T that serves to restrict this mode of *-no* licensing to internal arguments, because the external argument sitting in the spec of *v*P is in the search domain of (and hence accessible from) dependent T although it falls outside the search domain of weak *v*. Keeping this particular point in mind and without discussing the merit and potential problems of the GDT hypothesis, let us try to see if there is a slightly different way to accommodate the asymmetry that we see between (12) and (13), based on Miyagawa's insight.

Upon discussing feature transfer that starts out on C, we have tacitly assumed that the "recipient" of the transferred features is always T. There is good reason for this. T is immediately below C, and C and T are known to have an intimate connection (e.g., *that* selects a finite T whereas *for* selects an infinitival T). Also, Chomsky (2008), in discussing feature transfer, attempts to draw a parallelism between the C-T relation and the *v*-V relation, and for the latter, there is no verbal head below V. In my view, however, such considerations do not necessarily exclude other possibilities. In particular, let us entertain the idea that the phase head C may pass its features onto *v*, bypassing T that occurs in-between. One could raise some questions with this type of "non-local" feature transfer. For instance, "bypassing" of T may be a violation of the Head Movement Constraint, a familiar locality constraint on head movement. But the issue may not arise if, for example, T raises to C, in which case T would not intervene between C and weak *v* (because only the whole chain acts as an intervener). Besides, if D.Takahashi (2002) is correct, a head-to-head dependency need not be strictly local. All in all, therefore, feature transfer from C to *v* cannot and should not be dismissed off hand. Still, a non-local feature transfer, if attested, may be heavily restricted. Presumably C would be unable to transfer its features to strong *v* because the latter is also a phase head and thus should be inactive by the time C is introduced into the structure. But such considerations would not prevent C from transferring features to weak *v*, a non-phase head. And I would like to suggest that that's what is happening in (12) and (13): *-no* on the unaccusative subject in (12) is licensed by weak *v*, which inherits phi features from C. When that happens, T is not involved in the Agree relation, and I speculate that Case is realized as *-no* when T does not act as a probe. (14) illustrates this point:

(14)   a.   [$_{CP}$ [$_{TP}$ [$_{vP}$ DP .....] T] C]   (*-no*)

         ↑_____|
              Agree

     b.   [$_{CP}$ [$_{TP}$ [$_{vP}$ DP ....] T] C]   (*-ga*)

         ↑_____|↑__|
            Agree   inheritance

     c.   [$_{CP}$ [$_{TP}$ [$_{vP}$ DP ...   *v*]   T] C]   (*-no*)

         ↑_____|↑_____|
              Agree   inheritance

It may be that what is special about dependent T in the sense of Miyagawa (2012) is its ability to allow feature inheritance to be non-local, by somehow rendering itself "invisible/inactive" for the purpose of feature transfer, although this is nothing but a speculation.

   Let us thus expand the table in (11) by adding a column for the feature transfer from C to weak *v*.

(15)

	valuation by C ($\rightarrow$ *-no*)	inheritance to T ($\rightarrow$ *-ga*)	inheritance to weak *v* ($\rightarrow$ *-no*)
C$_{[+nominal]}$ in SJ	✓	✓	?[2]
C$_{temporal}$ in SJ	*	✓	✓
All other Cs in SJ	*	✓	*

As suggested above, the adnominal C may directly assign Case or transfer its formal features, while feature transfer is the only option for all other Cs. My speculation for C in the temporal adjunct clause is that feature transfer, while obligatory, may be local (T inherits the features of C) or non-local (weak *v* inherits the features of C). According to this line of research, *-no* on the unergative subject of the temporal adjunct clause sounds degraded (see (13)) because the C head of the temporal clause, like other Cs that occur in, e.g., the matrix clause, does not have the option of assigning Case on its own.

   If the foregoing discussion is on the track, the majority of Cs in SJ must transfer their features onto T. Let us now turn to Hichiku Japanese (HJ). As discussed in the literature (see Kato 2007, Nishioka 2014 etc.), the *-no* subject occurs rather freely in HJ (e.g., in the matrix clause (see (2)) and in all kinds of subordinate clauses). But its distribution is not completely free. According to Ochi and Saruwatari (2014), *-no* does not occur on the unergative subject unless the clause is headed by an overt C (note that the *-ga*

---

[2] Nothing in the discussion precludes the possibility that the C-to-weak *v* feature transfer takes place in the adnominal clause, an issue that I need to set aside.

subject in the same example would be fine with or without an overt C).[3]

(16)   Taroo   no   warat-ta   *(to yo).
       Taro   GEN   laugh-PST   C
       'Taro laughed.'

This is highly reminiscent of the GNC in temporal adverbial clauses in SJ as discussed above (see (12) and (13)). I speculate that that C in HJ has all three options at hand, being able to participate in Agree directly and/or passing its features to T or weak v. The only exception, I suggest, is the phonologically null C, which, like C of the temporal adverbial clause in SJ, cannot value Case directly.

(17)

|	valuation by C ($\rightarrow$ -no)	inheritance to T ($\rightarrow$ -ga)	inheritance to weak v ($\rightarrow$ -no)
C_{null} in HJ	*	✓	✓
All other Cs in HJ	✓	✓	✓

The example in (16) is analyzed as follows. When the matrix C is overt (e.g., *to yo*), it may assign Case values directly (see (18a)) or it may transfer its features to T (see (18b)). When it is phonetically null, it must transfer features. When features are inherited by T, we get *-ga*. And non-local transfer is not possible in this case because v is strong. Thus, we only get the *-ga* subject with a null C.

(18)   a.   [$_{CP}$ [$_{TP}$ [$_{vP}$ Taro-*no* laugh] T] C]

                         Agree

       b.   [$_{CP}$ [$_{TP}$ [$_{vP}$ Taro-*ga* laugh] T] C]

                    Agree   Inheritance

But the situation is different for an example such as (2) with an unaccusative predicate. Again, the null C may transfer its features, to T or to weak v. The derivation converges in either case because the unaccusative subject originates in VP and thus can be accessed by weak v as well as by T. We thus get the alternation between *-ga* and *-no* even when C is null in this case.

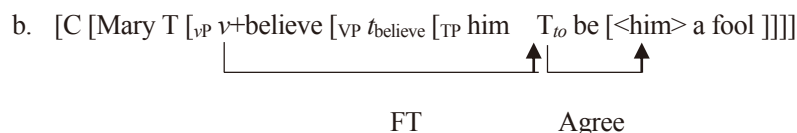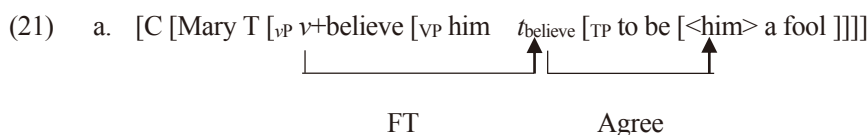(19)   a.   [$_{CP}$ [$_{TP}$ [$_{vP}$ [$_{VP}$ Bus-*ga*   come] v] T] C_{null}]

---

[3] There seems to be some variation among Hichiku speakers concerning this point. For now, I will stick to the paradigm given by Ochi and Saruwatari (2014).

Agree   inheritance

b.   [$_{CP}$ [$_{TP}$ [$_{vP}$ [$_{VP}$ Bus-*no* come] *v*] T] C$_{null}$]
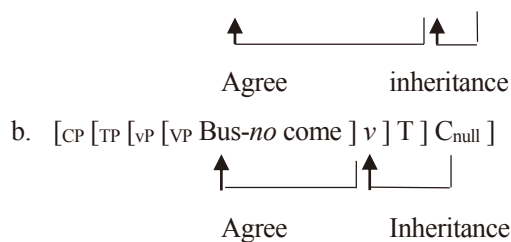
Agree   Inheritance

3. Some Remarks on Non-local Feature Transfer

Given our analysis of GNC in the previous section, we expect to find other instances of non-local feature inheritance. The Exceptional Case Marking construction (ECM) in English may be a case in point. According to Lasnik (1999), the ECM subject may raise to the matrix clause (i.e., the spec of the matrix VP), or it may move no further than the spec of the embedded TP. We could approach this optionality in terms of the choice of the 'recipient' of the formal features transferred by *v* of the higher clause. Assuming that the argument entering an Agree relation moves (in overt syntax) to the domain of its Case licensor (see (6b)), we can say that the ECM subject moves to the higher VP when V acts as a probe (see (21a)) and to the embedded TP when the infinitival T acts as a probe (see (21b)).
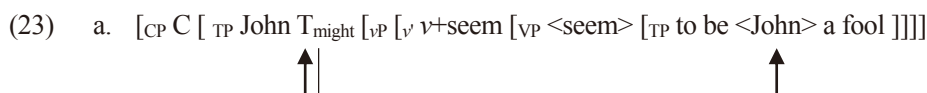
(20)   Mary believes him to be a fool.

(21)   a.   [C [Mary T [$_{vP}$ *v*+believe [$_{VP}$ him $t_{believe}$ [$_{TP}$ to be [<him> a fool]]]]]

           FT   Agree

b.   [C [Mary T [$_{vP}$ *v*+believe [$_{VP}$ $t_{believe}$ [$_{TP}$ him   T$_{to}$ be [<him> a fool]]]]]
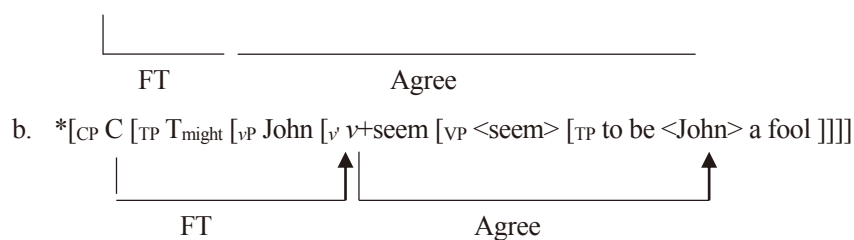
           FT   Agree

Unlike in GNC in Japanese, where we see two distinct manifestations of the Case value (i.e., *-ga* and *-no*) depending on whether or not T acts as a probe, the ECM subject always exhibits the accusative Case (*him* in the above example). I need to leave open the question of why that is so.

Unlike strong *v* in English, C in English does not seem to have the option of transferring its features non-locally (i.e., to weak *v*). As the pair of examples in (22) shows, the subject of a raising predicate such as *seem* must move to the TP of the higher clause, and cannot end up in the domain of *v* of the higher clause (see (22b)).

(22)   a.   John might seem to be a fool (but …).

b.   *might John seem to be a fool (but ….)

(23)   a.   [$_{CP}$ C [$_{TP}$ John T$_{might}$ [$_{vP}$ [$_{v'}$ *v*+seem [$_{VP}$ <seem> [$_{TP}$ to be <John> a fool]]]]]

```
       |_____|    _____
          FT                    Agree
```

b. *[_CP C [_TP T_{might} [_vP John [_{v'} v+seem [_VP <seem> [_TP to be <John> a fool]]]]]

```
       |_____|         ↑     |_____↑
          FT                    Agree
```

The following table summarizes our brief discussion of English raising constructions. Like the majority of Cs in SJ, C in English must transfer its features to T. Strong v in English likewise must transfer its features but can do so locally or non-locally. In this respect, it is analogous to the C head of temporal adverbial clauses in Japanese (see the table in (15)) and the null C of HJ (see (17)).

(24)

	Valuation by C/v	"local" FI (C to T; v to V)	"non-local" FI (C to weak v; v to T in ECM)
C in English	*	✓	*
v in English	*	✓	✓

4. Conclusion

This paper set out with two research questions surrounding GNC. How should we understand the alternation between -*ga* and -*no*? Is a unified analysis of GNC feasible? I argued that -*ga* and -*no* are different manifestations of the same Case value originating in X as represented in (6a), where I took X to be C. We get -*ga* when Case value is assigned by T that inherits relevant formal features from X, and -*no* otherwise. I have also sought a way to get us a step closer to a unified analysis of GNC, whose distribution crosscuts different types of clauses. All in all, the -*no* subject is disallowed when (i) feature inheritance from X is obligatory and (ii) the X-to-weak v feature transfer does not lead to convergence (e.g., the weak v head cannot locate a suitable goal in its search domain). Many issues inevitably arise from the proposal made here, including the question of why different types of C have the properties that they do concerning feature transfer, but I need to leave them for another occasion.

References

Chomsky, Noam (2008) On Phases. In: Robert Freidin, Carlos Otero and Maria-Luisa Zubizaretta (eds.), *Foundational issues in linguistic theory*, 133–166. Cambridge, MA: MIT Press.

Harada, S. I. (1971) Ga-no conversion and idiolectal variations in Japanese. *Gengo Kenkyu* 60: 25-38.

Hiraiwa, Ken (2001) On Nominative–genitive Conversion. In: Elena Guerzoni and Ora Matushansky (eds.) *A few from Building E39: Papers in syntax, semantics, and their interface*, 66–125. Cambridge, MA: MITWPL.

Hiraiwa, Ken (2005) Dimensions of symmetry in syntax: agreement and clausal architecture. Unpublished doctoral dissertation, MIT.

Kato, Sachiko (2007) Scrambling and the EPP in Japanese: From the viewpoint of the Kumamoto dialect in Japanese. In: Yoichi Miyamoto and Masao Ochi (eds.), *Proceedings of Formal Approaches to Japanese Linguistics 4*, 113-124. Cambridge, MA: MITWPL.

Kishimoto, Hideki (2017) Remarks on nominative-genitive conversion in Japanese. In: *Nanzan linguistics* 12, 1-27, Center for Linguistics, Nanzan University.

Lasnik, Howard (1999) Chains of arguments. In: Samuel David Epstein and Norbert Hornstein (eds.), *Working minimalism*, 189-216, Cambridge, MA: MIT Press.

Miyagawa, Shigeru (1993) Case-checking and Minimal Link Condition. In: *Papers on case and agreement 2*, 213–254. Cambridge, MA: MITWPL.

Miyagawa, Shigeru (2010) *Why agree, why move?*. Cambridge, MA: MIT Press.

Miyagawa, Shigeru (2012) *Case, argument structure, and word order*. New York: Routledge.

Miyagawa, Shigeru (in press) *Agreement beyond phi*. Cambridge, MA: MIT Press.

Nishioka, Nobuaki (2014) On the positions of nominative subject in Japanese: Evidence from Kumamoto dialect. Paper presented at 10th Workshop on Altaic Formal Linguistics (WAFL10). MIT, 2 May 2014.

Ochi, Masao (2001) Move F and *ga/no* conversion in Japanese. *Journal of East Asian Linguistics* 10: 247–286.

Ochi, Masao (2009) Overt object shift in Japanese. *Syntax* 12: 324–362.

Ochi, Masao (in press) Ga/No conversion. In: Masayoshi Shibatani, Shigeru Miyagawa, and Hisashi Noda (eds.), *Handbook of Japanese syntax*. Berlin: Mouton de Gruyter.

Ochi, Masao and Asuka Saruwatari (2014) Nominative/Genitive conversion in (in)dependent clauses in Japanese. Paper presented at the 10th Workshop on Altaic Formal Linguistics (WAFL10). MIT, 2 May 2014.

Pesetsky, David and Esther Torrego (2001) T-to-C: Causes and consequences. In Michael Kenstowicz (ed.), *Ken Hale: A life in language*, 355-426. Cambridge, MA: MIT Press.

Richards, Marc (2007) On Feature inheritance: An argument from the Phase Impenetrability Condition. *Linguistic Inquiry* 38: 563-572.

Takahashi, Daiko (2002) Determiner raising and scope shift. *Linguistic Inquiry* 33: 575-615.

Takahashi, Hisako (2010) Adverbial clauses and nominative/genitive conversion in Japanese. In: *Proceedings of the sixth workshop on Altaic formal linguistics* (WAFL 6), 357-371. Cambridge, MA: MITWPL.

Watanabe, Akira (1996) Nominative–genitive conversion and agreement in Japanese: A Cross-linguistic Perspective. *Journal of East Asian Linguistics* 5: 373–410.